

Geolast™ 701-70

Thermoplastic Vulcanizate

Product Description

A soft, black, oil resistant thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material combines good hot air and hot oil resistance for use in a wide range of applications. This grade of Geolast TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding, extrusion or blow molding. It is polyolefin based and recyclable within the manufacturing stream.

Key Features

- Recyclable.
- Designed for improved fluid resistance.

General

| | | | |
|---------------------------|--|---|---|
| Availability ¹ | <ul style="list-style-type: none"> ▪ Africa & Middle East ▪ Asia Pacific | <ul style="list-style-type: none"> ▪ Europe ▪ Latin America | <ul style="list-style-type: none"> ▪ North America |
| Applications | <ul style="list-style-type: none"> ▪ Automotive - Seals and Gaskets | <ul style="list-style-type: none"> ▪ Oil Resistant Seals and Gaskets | |
| Uses | <ul style="list-style-type: none"> ▪ Automotive Applications | <ul style="list-style-type: none"> ▪ Industrial Applications | |
| RoHS Compliance | <ul style="list-style-type: none"> ▪ RoHS Compliant | | |
| Automotive Specifications | <ul style="list-style-type: none"> ▪ GM GMP.E/P.081 | | |
| Color | <ul style="list-style-type: none"> ▪ Black | | |
| Form(s) | <ul style="list-style-type: none"> ▪ Pellets | | |
| Processing Method | <ul style="list-style-type: none"> ▪ Blow Molding ▪ Coextrusion ▪ Extrusion | <ul style="list-style-type: none"> ▪ Extrusion Blow Molding ▪ Injection Blow Molding ▪ Injection Molding | <ul style="list-style-type: none"> ▪ Multi Injection Molding ▪ Profile Extrusion ▪ Sheet Extrusion |
| Revision Date | <ul style="list-style-type: none"> ▪ 06/17/2014 | | |

| Physical | Typical Value (English) | Typical Value (SI) | Test Based On |
|----------------------------|-------------------------|------------------------|---------------|
| Density / Specific Gravity | 1.04 | 1.04 | ASTM D792 |
| Density | 1.04 g/cm ³ | 1.04 g/cm ³ | ISO 1183 |

| Hardness | Typical Value (English) | Typical Value (SI) | Test Based On |
|------------------------------|-------------------------|--------------------|---------------|
| Shore Hardness | | | ISO 868 |
| Shore A, 15 sec, 73°F (23°C) | 75 | 75 | |

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| Elastomers | Typical Value (English) | Typical Value (SI) | Test Based On |
|--|-------------------------|--------------------|---------------|
| Tensile Stress at 100% - Across Flow (73°F (23°C)) | 551 psi | 3.80 MPa | ASTM D412 |
| Tensile Stress at 100% - Across Flow (73°F (23°C)) | 551 psi | 3.80 MPa | ISO 37 |
| Tensile Strength at Break - Across Flow (73°F (23°C)) | 841 psi | 5.80 MPa | ASTM D412 |
| Tensile Stress at Break - Across Flow (73°F (23°C)) | 841 psi | 5.80 MPa | ISO 37 |
| Elongation at Break - Across Flow (73°F (23°C)) | 220 % | 220 % | ASTM D412 |
| Tensile Strain at Break - Across Flow (73°F (23°C)) | 220 % | 220 % | ISO 37 |
| Tear Strength - Across Flow (73°F (23°C), Die C) | 114 lbf/in | 20.0 kN/m | ASTM D624 |
| Tear Strength - Across Flow (73°F (23°C), Method Bb, Angle (Nicked)) | 110 lbf/in | 20 kN/m | ISO 34-1 |
| Compression Set (158°F (70°C), 22 hr, Type 1) | 29 % | 29 % | ASTM D395B |
| Compression Set (257°F (125°C), 70 hr, Type 1) | 36 % | 36 % | |
| Compression Set (158°F (70°C), 22 hr, Type A) | 29 % | 29 % | ISO 815 |
| Compression Set (257°F (125°C), 70 hr, Type A) | 36 % | 36 % | |

| Thermal | Typical Value (English) | Typical Value (SI) | Test Based On |
|-------------------------|-------------------------|--------------------|---------------|
| Brittleness Temperature | -26 °F | -32 °C | ASTM D746 |
| Brittleness Temperature | -26 °F | -32 °C | ISO 812 |

Injection Notes

Geolast TPV is incompatible with acetal and PVC. For more information regarding processing and mold design, please consult our Injection Molding Guide.

Extrusion Notes

Geolast TPV is incompatible with acetal and PVC. For more information regarding processing and die design, please consult our Extrusion Guide.

| Aging | Typical Value (English) | Typical Value (SI) | Test Based On |
|--|-------------------------|--------------------|---------------|
| Change in Tensile Strength in Air (257°F (125°C), 168 hr) | 5.0 % | 5.0 % | ASTM D573 |
| Change in Tensile Strength in Air (257°F (125°C), 168 hr) | 5.0 % | 5.0 % | ISO 188 |
| Change in Ultimate Elongation in Air (257°F (125°C), 168 hr) | -23 % | -23 % | ASTM D573 |
| Change in Tensile Strain at Break in Air (257°F (125°C), 168 hr) | -23 % | -23 % | ISO 188 |
| Change in Durometer Hardness in Air (Shore A, 257°F (125°C), 168 hr) | 0.0 | 0.0 | ASTM D573 |
| Change in Shore Hardness in Air (Shore A, 257°F (125°C), 168 hr) | 0.0 | 0.0 | ISO 188 |

Additional Information

Where applicable, test results based on fan gated, injection molded plaques.

Tensile strength, elongation and tensile stress are measured across the flow direction - ISO type 1, ASTM die C.

Compression set at 25% deflection.

This product may be manufactured by a third party under contract with Exxon Mobil Corporation or one of its affiliates, pursuant to a quality management system which complies with the requirements of ISO 9001:2015.

All products purchased directly from an ExxonMobil affiliate in Europe are REACH compliant. For products not imported into Europe by ExxonMobil, customers should assess their legal responsibilities under REACH.

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Legal Statement

This product, including the product name, shall not be used or tested in any medical application without the prior written acknowledgement of ExxonMobil Chemical as to the intended use. For detailed Product Stewardship information, please contact Customer Service.

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Processing Statement

Desiccant drying for 3 hours at 80°C (180°F) is recommended. Geolast TPV has a wide temperature processing window from 175 to 230°C (350 to 450°F) and is incompatible with acetal and PVC. The melt temperature should be maintained below 215°C (420°F). For more information, please consult our Safety Data Sheet, Injection Molding Guide and Extrusion Guide.

Notes

Typical properties: these are not to be construed as specifications.

¹ Product may not be available in one or more countries in the identified Availability regions. Please contact your Sales Representative for complete Country Availability.

For additional technical, sales and order assistance: www.exxonmobilchemical.com/ContactUs

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